

# Power, Distribution, and Specialty Transformer Manufacturing: 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
335311, Power, distribution, and specialty transformer manufacturing .....											
2002..	259	296	22 926	848 770	16 256	31 089	486 387	2 613 463	2 250 421	4 896 503	78 436
2001..	N	N	24 960	864 412	17 797	33 773	510 513	2 299 190	2 389 656	4 756 493	79 987
2000..	N	N	26 227	890 249	19 161	38 786	529 166	2 745 271	2 557 620	5 250 367	100 774
1999..	N	N	25 541	839 336	18 668	40 044	506 927	2 439 719	2 337 378	4 760 585	100 215
1998..	N	N	26 758	831 006	19 753	39 977	508 941	2 476 386	2 343 284	4 779 143	140 889
1997..	275	318	26 897	825 550	20 158	41 367	518 189	2 566 056	2 189 069	4 743 781	131 848

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>335311, Power, distribution, and specialty transformer manufacturing</b>												
United States .....	—	296	140	22 926	848 770	16 256	31 089	486 387	2 613 463	2 250 421	4 896 503	178 436
California .....	2	37	17	1 702	77 661	1 129	2 252	43 586	126 418	133 505	271 724	13 089
Connecticut .....	5	10	7	431	15 491	288	796	7 605	31 401	24 637	55 546	11 667
Florida .....	7	10	4	671	18 228	451	885	9 214	49 917	27 953	78 169	11 126
Georgia .....	—	5	4	995	33 359	797	1 677	23 881	79 531	106 865	186 634	12 460
Illinois .....	—	22	12	1 492	55 300	882	1 795	21 611	253 942	127 952	397 590	12 139
Michigan .....	3	6	3	188	7 914	93	210	3 210	18 931	9 230	27 783	1646
Minnesota .....	8	10	3	134	4 673	103	196	3 001	12 819	11 256	24 083	1625
New Jersey .....	2	20	7	804	36 284	377	901	12 180	100 756	95 438	194 871	1822
New York .....	1	10	3	381	15 230	203	433	5 765	27 017	18 053	45 859	11 126
North Carolina .....	—	8	6	943	35 256	633	1 350	20 470	106 767	93 785	202 621	11 916
Ohio .....	—	14	5	481	9 897	374	677	6 030	36 708	32 848	69 771	12 053
Pennsylvania .....	—	12	4	530	21 277	382	907	12 927	64 244	59 595	121 553	11 052
Tennessee .....	—	8	5	1 045	36 662	722	1 280	19 562	129 317	123 238	252 471	13 127
Texas .....	1	26	8	696	23 523	567	1 339	16 409	55 597	75 499	132 246	13 802
Virginia .....	—	11	8	1 724	64 325	1 198	2 379	34 183	248 126	165 077	413 895	11 212
Wisconsin .....	—	10	9	2 458	98 547	1 801	3 448	58 404	553 498	311 842	868 717	15 882

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>335311, Power, distribution, and specialty transformer manufacturing</b>	
Companies <sup>1</sup> .....	number.. 259
All establishments <sup>2</sup> .....	number.. 296
Establishments with 1 to 19 employees .....	number.. 156
Establishments with 20 to 99 employees .....	number.. 80
Establishments with 100 employees or more .....	number.. 60
All employees <sup>3</sup> .....	number.. 22 926
Total compensation .....	\$1,000.. 1 080 195
Annual payroll .....	\$1,000.. 848 770
Total fringe benefits .....	\$1,000.. 231 425
Production workers, average for year .....	number.. 16 256
Production workers on March 12 .....	number.. 16 681
Production workers on May 12 .....	number.. 16 359
Production workers on August 12 .....	number.. 16 225
Production workers on November 12 .....	number.. 15 719
Production worker hours .....	1,000.. 31 089
Production worker wages .....	\$1,000.. 486 387
Total cost of materials .....	\$1,000.. 2 250 421
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 2 043 619
Resales .....	\$1,000.. 116 168
Purchased fuels .....	\$1,000.. 12 736
Purchased electricity .....	\$1,000.. 33 962
Contract work .....	\$1,000.. 43 936
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 590 322
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. -
Total value of shipments .....	\$1,000.. 4 896 503
Primary products value of shipments .....	\$1,000.. 4 481 415
Secondary products value of shipments .....	\$1,000.. 216 909
Total miscellaneous receipts .....	\$1,000.. 198 179
Value of resales .....	\$1,000.. 143 073
Contract receipts .....	\$1,000.. 33 664
Other miscellaneous receipts .....	\$1,000.. 21 442
Primary products specialization ratio .....	percent.. 95
Value of primary products shipments made in all industries .....	\$1,000.. 4 656 788
Value of primary products shipments made in this industry .....	\$1,000.. 4 481 415
Value of primary products shipments made in other industries .....	\$1,000.. 175 373
Coverage ratio .....	percent.. 96
Value added .....	\$1,000.. 2 613 463
Total inventories, beginning of year .....	\$1,000.. 592 166
Finished goods inventories .....	\$1,000.. 215 524
Work-in-process inventories .....	\$1,000.. 131 497
Materials and supplies inventories .....	\$1,000.. 245 145
Total inventories, end of year .....	\$1,000.. 555 205
Finished goods inventories .....	\$1,000.. 198 585
Work-in-process inventories .....	\$1,000.. 115 817
Materials and supplies inventories .....	\$1,000.. 240 803
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '1 410 436
Total capital expenditures (new and used) .....	\$1,000.. '78 436
Buildings and other structures (new and used) .....	\$1,000.. '14 095
Machinery and equipment (new and used) .....	\$1,000.. '64 341
Automobiles, trucks, etc., for highway use .....	\$1,000.. '2 040
Computers and peripheral data processing equipment .....	\$1,000.. '4 723
All other expenditures for machinery and equipment .....	\$1,000.. '57 578
Total retirements .....	\$1,000.. '74 920
Gross value of depreciable assets at end of year .....	\$1,000.. '1 413 952
Depreciation charges during year .....	\$1,000.. '88 122
Total rental payments .....	\$1,000.. 43 377
Buildings and other structures .....	\$1,000.. 22 915
Machinery and equipment .....	\$1,000.. 20 462
Total other expenses <sup>4</sup> .....	\$1,000.. 333 893
Response coverage ratio <sup>5</sup> .....	percent.. 85
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 24 618
Communications services <sup>4</sup> .....	\$1,000.. 5 355
Legal services <sup>4</sup> .....	\$1,000.. 3 247
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 2 182
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 20 484
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 5 173
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 2 598
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 4 932
Taxes and license fees <sup>4</sup> .....	\$1,000.. 12 609
All other expenses <sup>4</sup> .....	\$1,000.. 252 700

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>335311, Power, distribution, and specialty transformer manufacturing</b>											
All establishments .....	—	296	22 926	848 770	16 256	31 089	486 387	2 613 463	2 250 421	4 896 503	'78 436
Establishments with—											
1 to 4 employees .....	9	88	190	7 112	143	272	4 503	17 014	17 993	34 930	'771
5 to 9 employees .....	9	32	222	9 097	166	339	5 957	24 338	23 692	47 883	'677
10 to 19 employees .....	5	36	491	18 644	346	762	11 953	59 035	45 163	104 737	'1 181
20 to 49 employees .....	1	48	1 554	52 790	1 089	2 734	28 458	109 499	121 886	232 207	'4 723
50 to 99 employees .....	2	32	2 357	83 502	1 644	3 441	42 824	197 727	171 735	372 485	'8 095
100 to 249 employees .....	—	32	5 520	197 420	3 745	7 304	105 212	640 731	491 490	1 143 498	'15 248
250 to 499 employees .....	—	23	8 193	312 232	5 746	11 383	179 372	1 185 049	921 827	2 115 591	'27 892
500 to 999 employees .....	—	4	g	D	D	D	D	D	D	D	D
1,000 to 2,499 employees .....	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	122	539	21 766	411	830	14 213	55 191	60 080	115 271	'1 717

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
335311	Power, distribution, and specialty transformer manufacturing .....	296	22 926	848 770	16 256	31 089	486 387	2 613 463	2 250 421	4 896 503	'78 436
3353111	Power and distribution transformers, except parts .....	59	12 661	508 394	9 333	17 114	322 879	1 258 183	1 273 285	2 543 674	'54 828
3353113	Specialty transformers, except fluorescent lamp ballast .....	22	2 120	58 634	1 560	3 366	33 831	135 041	117 887	253 579	'3 481
3353115	Fluorescent lamp ballasts .....	10	2 443	59 128	1 914	3 205	31 232	650 193	274 858	935 899	'6 407
3353117	Commercial, institutional, and industrial general-purpose transformers, all voltages .....	30	1 982	69 443	1 319	2 983	34 482	170 684	138 705	310 515	'5 455
3353119	Power regulators, boosters, and other transformers and parts for all transformers .....	19	2 327	101 839	1 073	2 343	30 647	280 616	344 617	631 522	'3 316

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
335311	Power, distribution, and specialty transformer manufacturing .....	2002.. N	X	X	4 656 788
	1997.. N		X	X	4 683 558
3353111	Power and distribution transformers, except parts .....	2002.. N	X	X	2 308 993
	1997.. N		X	X	2 220 179
33531111	Distribution transformers (except general-purpose), overhead type, single-phase, liquid-immersed, 500 kVA and smaller (except parts) .....	2002.. N	X	X	477 393
	1997.. N		X	X	521 083
3353111101	Distribution transformers (except general-purpose), overhead type, single-phase, liquid-immersed, 500 kVA and smaller (except parts) .....	2002.. 22	X	X	477 393
	1997.. 18		X	X	521 083
33531112	Distribution transformers (except general-purpose), compartmentalized pad-mounted, single-phase, liquid-immersed, 500 kVA and smaller (except parts) .....	2002.. N	X	X	295 644
	1997.. N		X	X	230 351
3353111204	Distribution transformers (except general-purpose), compartmentalized pad-mounted, single-phase, liquid-immersed, 500 kVA and smaller (except parts) .....	2002.. 15	X	X	295 644
	1997.. 13		X	X	230 351
33531113	Other distribution transformers (except general-purpose), including network transformers, single-phase, and liquid-immersed (all voltages) (except parts) .....	2002.. N	X	X	358 348
	1997.. N		X	X	328 335
3353111307	Distribution transformers (except general-purpose), subsurface and subway types, single-phase, liquid-immersed, 500 kVA and smaller (except parts) .....	2002.. 5	X	X	D
	1997.. 4		X	X	14 944
3353111311	Distribution three-phase transformers (except general-purpose), liquid-immersed, all voltages, 500 kVA and smaller (except parts) .....	2002.. 12	X	X	178 749
	1997.. 15		X	X	184 808
3353111313	Distribution network transformers (except general-purpose), all ratings, excluding network protectors (except parts) .....	2002.. 4	X	X	D
	1997.. 4		X	X	D
3353111316	Distribution transformers (except general-purpose), single-phase and three-phase, pad-mounted (dry), 500 kVA and smaller (except parts) .....	2002.. 7	X	X	114 749
	1997.. 9		X	X	D
33531114	Small conventional and power transformers, single- and three-phase (all voltages), primary and secondary unit substations .....	2002.. N	X	X	712 262
	1997.. N		X	X	683 934
3353111419	Small power transformers, liquid-immersed, single- and three-phase (all voltages), compartmentalized pad-mounted, subsurface underground and conventional subway type, 501 kVA through 2500 kVA .....	2002.. 16	X	X	278 376
	1997.. 12		X	X	288 745
3353111422	Small conventional transformers and autotransformers, liquid-immersed, single- and three-phase (all voltages), primary unit and single circuit unit substations, 501 kVA through 2500 kVA .....	2002.. 12	X	X	58 153
	1997.. 9		X	X	80 914
3353111425	Small power transformers, single- and three-phase (all voltages), liquid-immersed conventional, primary unit and single circuit unit substations, 2501 kVA through 10,000 kVA .....	2002.. 16	X	X	202 570
	1997.. 14		X	X	108 202
3353111428	Dry-type small conventional power transformers, single- and three-phase, all voltages, primary unit substation (including core and coil units) .....	2002.. 11	X	X	75 269
	1997.. 10		X	X	93 125
3353111431	Secondary unit substation power transformers, liquid-immersed, all kVA ratings .....	2002.. 6	X	X	56 306
	1997.. 5		X	X	65 617
3353111434	Secondary unit substation power transformers, dry-type, all kVA ratings .....	2002.. 6	X	X	41 588
	1997.. 6		X	X	47 331
33531115	Large liquid-immersed power transformers with and without load-tap-changing .....	2002.. N	X	X	425 554
	1997.. N		X	X	398 727
3353111537	Large liquid immersed power transformers with load-tap-changing, 10,001 kVA, OA to 30,000 kVA, OA (50,000 kVA, top FOA) .....	2002.. 8	X	X	153 911
	1997.. 7		X	X	152 792
3353111541	Large liquid immersed power transformers without load-tap-changing, 10,001 kVA, OA to 30,000 kVA, OA (50,000 kVA, top FOA) .....	2002.. 8	X	X	81 784
	1997.. 8		X	X	D
3353111543	Large liquid-immersed power transformers with load-tap-changing, 30,001 kVA, OA (50,000 kVA, top FOA) to 100,000 kVA, OA (167,000 kVA, top FOA) .....	2002.. 5	X	X	53 760
	1997.. 4		X	X	22 849
3353111546	Large liquid-immersed power transformers without load-tap-changing, 30,001 kVA, OA (50,001 kVA, top FOA) to 100,000 kVA, OA (167,000 kVA, top FOA) .....	2002.. 5	X	X	D
	1997.. 5		X	X	24 795
3353111549	Large liquid-immersed power transformers with load-tap-changing, 100,001 kVA, OA (167,001 kVA, top FOA) and larger .....	2002.. 1	X	X	D
	1997.. 2		X	X	D
3353111552	Large liquid-immersed power transformers without load-tap-changing, 100,001 kVA, OA (167,001 kVA, top FOA) and larger .....	2002.. 1	X	X	D
	1997.. 2		X	X	D
3353111Y	Power and distribution transformers, except parts, nsk .....	2002.. N	X	X	39 792
	1997.. N		X	X	57 749
3353111YV	Power and distribution transformers, except parts, nsk .....	2002.. N	X	X	39 792
	1997.. N		X	X	57 749

See footnotes at end of table.



**Table 6a. Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
335311	Power, distribution, and specialty transformer manufacturing—Con.				
3353113	Specialty transformers, except fluorescent lamp ballast .....	2002.. N	X	X	355 093
	..... 1997.. N		X	X	511 903
33531131	Specialty transformers, except fluorescent lamp ballasts .....	2002.. N	X	X	338 192
	..... 1997.. N		X	X	509 436
3353113101	Open core and coil units, excluding machine tool control transformers and all units end-bell enclosed (250 VA and under) .....	2002.. 12	X	X	31 358
	..... 1997.. 18		X	X	77 896
3353113104	Machine tool control transformers .....	2002.. 10	X	X	30 964
	..... 1997.. 15		X	X	D
3353113107	Transformers for arc welders .....	2002.. 1	X	X	D
	..... 1997.. 2		X	X	D
3353113109	Indoor and outdoor current instrument transformers .....	2002.. 10	X	X	D
	..... 1997.. 12		X	X	45 550
3353113113	Indoor and outdoor voltage instrument transformers .....	2002.. 8	X	X	57 911
	..... 1997.. 6		X	X	18 441
3353113115	High intensity discharge lamp transformers (ballasts) .....	2002.. 2	X	X	D
	..... 1997.. 7		X	X	181 056
3353113116	All other specialty transformers (including luminous tube and ignition transformers), excluding internal combustion engine ignition .....	2002.. 13	X	X	143 999
	..... 1997.. 19		X	X	128 138
3353113Y	Specialty transformers, except fluorescent lamp ballasts, nsk .....	2002.. N	X	X	16 901
	..... 1997.. N		X	X	2 467
3353113YVV	Specialty transformers, except fluorescent lamp ballasts, nsk .....	2002.. N	X	X	16 901
	..... 1997.. N		X	X	2 467
3353115	Fluorescent lamp ballasts .....	2002.. N	X	X	831 359
	..... 1997.. N		X	X	968 909
33531151	Fluorescent lamp ballasts .....	2002.. N	X	X	831 359
	..... 1997.. N		X	X	968 909
3353115100	Fluorescent lamp ballasts <sup>1</sup> .....	2002.. 12	X	X	831 359
	..... 1997.. 17		X	X	968 909
3353117	Commercial, institutional, and industrial general-purpose transformers, all voltages .....	2002.. N	X	X	261 116
	..... 1997.. N		X	X	303 791
33531171	Commercial, institutional, and industrial general-purpose transformers, all voltages .....	2002.. N	X	X	251 096
	..... 1997.. N		X	X	289 378
3353117101	Commercial, institutional, and industrial general-purpose transformers, single- and three-phase, 3 kVA and below, all voltages .....	2002.. 17	X	X	86 984
	..... 1997.. 22		X	X	140 871
3353117104	Commercial, institutional, and industrial general-purpose transformers, single- and three-phase, 3.01 kVA through 15 kVA, all voltages .....	2002.. 12	X	X	37 887
	..... 1997.. 15		X	X	23 477
3353117107	Commercial, institutional, and industrial general-purpose transformers, single- and three-phase, 15.01 kVA through 100 kVA, all voltages .....	2002.. 18	X	X	48 672
	..... 1997.. 15		X	X	42 056
3353117111	Commercial, institutional, and industrial general-purpose transformers, single- and three-phase, 100.01 kVA and above, all voltages .....	2002.. 11	X	X	17 265
	..... 1997.. 12		X	X	25 322
3353117113	Other commercial, institutional, and industrial general-purpose transformers, including saturable core reactors and voltage regulating transformers .....	2002.. 18	X	X	60 288
	..... 1997.. 18		X	X	57 652
3353117Y	Commercial, institutional, and industrial general-purpose transformers, all voltages, nsk .....	2002.. N	X	X	10 020
	..... 1997.. N		X	X	14 413
3353117YVV	Commercial, institutional, and industrial general-purpose transformers, all voltages, nsk .....	2002.. N	X	X	10 020
	..... 1997.. N		X	X	14 413
3353119	Power regulators, boosters, and other transformers and parts for all transformers .....	2002.. N	X	X	673 988
	..... 1997.. N		X	X	514 466
33531191	Power regulators, boosters, and other transformers and parts for all transformers .....	2002.. N	X	X	646 289
	..... 1997.. N		X	X	476 972
3353119101	Transmission and distribution voltage regulators, boosters, and other special-purpose transformers .....	2002.. 26	X	X	479 298
	..... 1997.. 35		X	X	320 662
3353119104	Parts, including renewal and repair parts, subassemblies and accessories for all transformers .....	2002.. 14	X	X	166 991
	..... 1997.. 20		X	X	156 310
3353119Y	Power regulators, boosters, and other transformers and parts for all transformers, nsk .....	2002.. N	X	X	27 699
	..... 1997.. N		X	X	37 494
3353119YVV	Power regulators, boosters, and other transformers and parts for all transformers, nsk .....	2002.. N	X	X	27 699
	..... 1997.. N		X	X	37 494
335311W	Power, distribution, and specialty transformer manufacturing, nsk, total .....	2002.. N	X	X	226 239
	..... 1997.. N		X	X	164 310
335311WY	Power, distribution, and specialty transformer manufacturing, nsk, total .....	2002.. N	X	X	226 239
	..... 1997.. N		X	X	164 310
335311WYWW	Power, distribution, and specialty transformer manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	117 779
	..... 1997.. N		X	X	74 443
335311WYWY	Power, distribution, and specialty transformer manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	108 460

See footnotes at end of table.

Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
335311	Power, distribution, and specialty transformer manufacturing—Con.				
335311W	Power, distribution, and specialty transformer manufacturing, nsk, total—Con.				
335311WY	Power, distribution, and specialty transformer manufacturing, nsk, total—Con.				
335311WYWY	Power, distribution, and specialty transformer manufacturing, nsk, for administrative-record establishments—Con.				
	1997..	N	X	X	89 867

<sup>1</sup>For additional detail, see Current Industrial Report MQ335C, Fluorescent Lamp Ballasts.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3353111	Power and distribution transformers, except parts	
	United States..... 2002..	2 308 993
	..... 1997..	2 220 179
	California ..... 2002..	184 220
	..... 1997..	109 766
	Virginia ..... 2002..	252 166
	..... 1997..	223 078
3353113	Specialty transformers, except fluorescent lamp ballast	
	United States..... 2002..	355 093
	..... 1997..	511 903
	Illinois ..... 2002..	26 055
	..... 1997..	28 377
3353115	Fluorescent lamp ballasts	
	United States..... 2002..	831 359
	..... 1997..	968 909
	Illinois ..... 2002..	221 906
	..... 1997..	179 410
3353117	Commercial, institutional, and industrial general-purpose transformers, all voltages	
	United States..... 2002..	261 116
	..... 1997..	303 791
	California ..... 2002..	41 244
	..... 1997..	26 559
	Connecticut ..... 2002..	12 215
	..... 1997..	N
	New Jersey ..... 2002..	12 004
	..... 1997..	24 677
3353119	Power regulators, boosters, and other transformers and parts for all transformers	
	United States..... 2002..	673 988
	..... 1997..	514 466

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
335311	Power, distribution, and specialty transformer manufacturing		
00900001	Total materials .....2002..	X	2 043 619
	.....1997..	X	2 056 373
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	11 280
	.....1997..	X	35 501
33210001	Forgings .....1,000 s tons..2002..	S	2 041
	.....1997..	X	D
33200095	Other fabricated metal products (excluding castings and forgings) .....2002..	X	33 865
	.....1997..	X	80 045
33131501	Aluminum and aluminum-base alloy sheet, plate, foil, and welded tubing..... mil lb..2002..	S	33 557
	.....1997..	X	50 455
32551003	Paints, varnishes, stains, lacquers, shellacs, japans, enamels, and allied products .....1,000 gallons..2002..	S	19 237
	.....1997..	X	24 197
33142111	Copper and copper-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	36 594
	.....1997..	X	33 742
33100082	Other nonferrous metal shapes and forms (excluding aluminum and aluminum-base alloy and copper and copper-base alloy castings, forgings, and fabricated metal products).....2002..	X	11 123
	.....1997..	N	N
33500007	Electrical industrial capacitors, resistors, rheostats, and coil windings .....2002..	X	87 543
	.....1997..	X	167 778
33100035	Castings, rough and semifinished .....2002..	X	18 591
	.....1997..	X	D
33120001	Steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	466 711
	.....1997..	X	523 399
33100055	All other aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	15 660
	.....1997..	X	14 776
33100097	Magnet wire .....2002..	X	191 747
	.....1997..	X	242 954
331000A1	Insulated wire and cable (excluding magnet wire) .....2002..	X	43 059
	.....1997..	X	33 607
32410003	Refined petroleum products (transformer oils, lubricating oils and greases, etc.) .....2002..	X	70 095
	.....1997..	X	75 312
32711301	Porcelain, steatite, and other ceramic electrical products .....2002..	X	60 260
	.....1997..	X	65 592
32210015	Paper and paperboard products (excluding paperboard boxes, containers, and corrugated paperboard) .....2002..	X	33 953
	.....1997..	X	52 137
33593101	Current-carrying wiring devices .....2002..	X	25 459
	.....1997..	X	68 156
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	397 659
	.....1997..	X	270 523
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	485 185
	.....1997..	X	306 511

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.